

III. AMENDMENTS TO THE SPECIFICATION

Replace the second full paragraph on page 10, lines 8-11, with:

Figure 2 is a fragmentary cross-sectional view taken substantially along the line 2-2 of Figure 1, and showing a top plan view of the annular magnet and magnetic field sensor elements.

Replace the paragraph beginning on page 24, line 17, through page 25, line 3, with:

When configured as a tachometer for sensing complete revolutions of the shaft 14, the sensor 50 includes three Hall-device sensor pairs 16 arranged as shown in Figure 8, three amplifier circuits 34b generally depicted in Figure 6b, and the commutation circuit 58 shown in Figure 10. The input resistors 38 are omitted from the amplifier circuits to create an identical differentiating circuit for each segment, producing outputs voltages V_{12} , V_{56} , and V_{43} that are proportional to shaft speed. The mean operating level of each output segment V_{12} , V_{56} , and V_{43} is adjusted to equal voltage voltages levels by tuning of the associated bias reference voltage V_{REF} . Figure 11 shows a graph of a typical output voltage V_{out} from the sensor 50 versus rotational rate for a continuously rotating shaft. This produces a contactless equivalent to a brush tachometer without the low reliability and shorter life associated with brush tachometers, is easily integrated into an overall actuator or motion control package, and requires only a few inexpensive components to implement.